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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,602	11/18/2003	Min-Ho Park	P-0568	2942

34610 7590 11/16/2006

FLESHNER & KIM, LLP
P.O. BOX 221200
CHANTILLY, VA 20153

EXAMINER

DUONG, HUNG V

ART UNIT PAPER NUMBER

2835

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/714,602

Applicant(s)

PARK, MIN-HO

Examiner

Hung v. Duong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Hung V. Duong

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/5/06

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

HUNG VAN DUONG
PRIMARY EXAMINER

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 11-15, 18, 21-22, 29-30, 37-39, 43-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Yagi et al (EP 0845 795A2).

Regarding claims 1-7, 11-15, 18, 21-22, 29-30, 37-39, 43-46 Yagi et al disclose in figures 1(b) and 9, a keypad comprising: a sheet 11 having a plurality of holes 29-4; and a plurality of keys 21-4 independently fastened within respective ones of the holes 29-4, wherein the keys 21-4 are detached from one another and are supported by the sheet 11 within a housing of the portable wireless terminal wherein the keys 21-4 include stopping portions 23-4 which fasten the keys 21-4 within respective ones of the holes 29-4 wherein the stopping portions 23-4 are integrally formed with the keys 21-4 wherein the stopping portions 23-4 and the keys 21-4 are made from a same material wherein the stopping portions 23-4 are located at lower surfaces of the keys 21-4 , wherein each key 21-4 includes a recess for receiving a portion of the sheet 11 near the hole 29-4, and wherein portions of the key 21-4 located above and below the recess overlap and contact the portion of the sheet 11 near the hole 21-4 wherein the portion of

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each key 21-4 located below the recess defines a stopping portion 23-4 for holding the key 21-4 within the hole 29-4 wherein the keys 21-4 are formed of a plastic material wherein the keys 21-4 protrude above a front case of the portable wireless device wherein the sheet 11 is substantially parallel to a front case of the portable wireless wherein the recess is a circumferential recess wherein the recess extends from an interior of the key to an outermost circumferential surface between the portions of the key that are above and below the recess wherein the stopping portion 23-4 is located along a lower surface of the key 21-4.

3. Claims 1, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Asada et al (US Pat. 4,395,817).

Regarding claims 1,12 Asada et al disclose in figure 4, a keypad comprising: a sheet 11 having a plurality of holes 12b; and a plurality of keys 11a independently fastened within respective ones of the holes 12b, wherein the keys 11a are detached from one another and are supported by the sheet 11 within a housing of the portable wireless terminal.

Regarding method claims 12-15, 29-30, 43-46 the structure as mentioned above can perform the method claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagi et al (EP 0845 795A2) in view of (CN2400887).

Regarding claims 8, 16 Yagi et al disclose all the subject matter of the claimed invention except for an adhesive layer adjacent a lower surface of the sheet and contacting lower surfaces of the keys, the adhesive layer providing additional force for holding the keys within the holes of the sheet. However (CN2400887) discloses an adhesive layer adjacent a lower surface of the sheet and contacting lower surfaces of the keys, the adhesive layer providing additional force for holding the keys within the holes of the sheet (see figure 3). Therefore, it would be obvious to one of ordinary skill in the art to add an adhesive layer of (CN2400887) into Yagi et al 's keypad in order to be good fastened the key within the sheet.

6. Claims 9, 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagi et al (EP 0845 795A2) in view of (CN2400887) and further in view of (CN1138170).

Regarding claims 9, 41 Yagi et al and (CN2400887) disclose all the subject matter of the claimed invention except for the adhesive layer includes a plurality of protrusions aligned with respective ones of the keys. However (CN1138170) discloses the adhesive layer includes a plurality of protrusions aligned with respective ones of the keys (see figure 3). Therefore, it would be obvious to one of ordinary skill in the art to modify the adhesive layer includes a plurality of protrusions aligned with respective

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ones of the keys of (CN1138170) into (CN2400887) and Yagi et al ' s adhesive layer in order to be good fixing in contact between the component.

7. Claims 10 and 17, 40, 42, 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagi et al (EP 0845 795A2) in view of (CN2400887) and further in view of Soloway et al (US Pat. 4,892,981).

Regarding claims 10, 17, 40, 42, 47-48 Yagi et al and (CN2400887) disclose all the subject matter of the claimed invention except for the adhesive layer includes a silicon material. However Soloway et al disclose the adhesive layer includes a silicon material (see column 2, line 14). Therefore, it would be obvious to one of ordinary skill in the art to modify the adhesive layer includes silicon material of Soloway et al into (CN2400887) and Yagi et al ' s adhesive layer in order to be good a common fabricated from elastomeric material.

8. Claims 13, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagi et al (EP 0845 795A2) in view of Soloway et al (US Pat. 4,892,981).

Regarding claims 13, 19-20 Yagi et al disclose all the subject matter of the claimed invention except for inserting the keys into the holes by an insert injection molding method, keys using a pin-point gate method or spraying the keys to enhance tactility of the keys. However Soloway et al disclose an insert injection molding method (see column 4, line 60), enhance tactility of the keys (abstract). Therefore, it would be obvious to one of ordinary skill in the art to utilize an insert injection molding method keys using a pin-point gate method or spraying the keys to enhance tactility of the keys

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of Soloway et al into Yagi et al ' s keypad in order to be good in fastening and enable a user to tactically respond to keys.

9. Claims 23-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagi et al (EP 0845 795A2) in view of Park (US Pat. 6,968,054).

Regarding claims 23-36 Yagi et al disclose all the subject matter of the claimed invention in figures 1-2, except for another sheet including a plurality of dome switches aligned with respective ones of the keys. However Yagi et al in figures 2-3 discloses another sheet including a plurality of dome switches aligned with respective ones of the keys. Therefore, it would be obvious to one of ordinary skill in the art to modify another sheet including a plurality of dome switches aligned with respective ones of the keys of figures 2-4 into Yagi et al's keypad in order to be good in contact and transferring the signal accordingly.

Response to Amendment

10. Applicant's arguments with respect to old claims 1-36 and new claims 37-48 has been considered but is moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

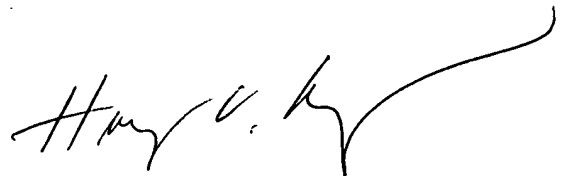
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung v Duong whose telephone number is 571-272-2041. The examiner can normally be reached on M-F from 8:30 to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Field can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HVD

11/10/06

A handwritten signature in black ink, appearing to read 'Hung v. Duong', with a long, sweeping horizontal line extending to the right.

Hung Duong
Primary Examiner.